

What is Claimed is:

1. A light tube for a cold electrode fluorescent lamp, comprising:
  - a light tube body, having a first end portion and second end portion, containing an inert gas, a mercury substance and a layer of phosphor coated on an inner surface of  
5 said light tube body;
  - a first electrode disposed at said first end portion in said light tube body, adapted for connecting to a first terminal of electricity;
  - a second electrode disposed at said second end portion in said light tube body, adapted for electrically connecting to a second terminal of electricity for emitting  
10 electrons to excite said mercury substance for conducting said electrons to said first electrode as an electric loop, wherein said excited mercury substance emits ultra violet rays causing said phosphor coating to generate visible light; and
  - an activated gas absorber, made of zirconium-vanadium-iron alloy, formed at said second electrode for absorbing oxygenic gas.
- 15 2. The light tube, as recited in claim 1, wherein said activated gas absorber is made from a zirconium-vanadium-iron gas absorber which is activated at an activation temperature of lower than 900 degrees Celsius.
- 20 3. The light tube, as recited in claim 1, wherein said activated gas absorber is made from a zirconium-vanadium-iron gas absorber which is activated at an activation temperature of 390 degrees Celsius.
4. The light tube, as recited in claim 1, wherein said second electrode is shaped as a single layer plate for enlarging a surface area of said second electrode in order to enhance said second electrode in terms of resisting oxidation and surviving an impact force applied to said light tube.
- 25 5. The light tube, as recited in claim 1, wherein said second electrode is shaped as a two-layer plate for enlarging a surface area of said second electrode in order

to enhance said second electrode in terms of resisting oxidation and surviving an impact forced applied to said light tube.

6. The light tube, as recited in claim 1, wherein said second electrode is shaped as a tube having a cylindrical side wall defining an inner hollow portion in order  
5 to enhance said second electrode in terms of resisting oxidation and surviving an impact forced applied to said light tube.

7. The light tube, as recited in claim 1, wherein said second electrode is shaped as a spiral, which has a constant cross-section along a longitudinal direction of  
10 said second electrode in order to enhance said second electrode in terms of resisting oxidation and surviving an impact forced applied to said light tube.

8. The light tube, as recited in claim 1, wherein said second electrode is shaped as a spiral that has a cross-section varying along a longitudinal direction of said second electrode in order to enhance said second electrode in terms of resisting oxidation and surviving an impact forced applied to said light tube.

15 9. The light tube, as recited in claim 1, wherein said light tube is shaped as a spiral with a constant area of cross-section along a longitudinal direction of said light tube in order to reduce a space occupied by said same.

20 10. The light tube, as recited in claim 1, wherein said light tube is shaped as a spiral with a wider top tapering vertically to a bottom of said light tube in order to reduce a space occupied by said same.

11. The light tube, as recited in claim 1, wherein said light tube is shaped as a spiral with a wider bottom tapering vertically to a top of said light tube in order to reduce a space occupied by said same.

25 12. The light tube, as recited in claim 1, wherein said light tube is shaped as a coil on a plan in order to reduce a space occupied by said same.

13. A cold electrode fluorescent lamp for illumination, comprising:

a housing;

a base for supporting said housing, having a first terminal and a second terminal insulated from said first terminal for electrically connected to voltage;

5        a light tube, disposed in said housing, having a first end portion and a second end portion, wherein said light tube contains an inert gas, a mercury substance and a layer of phosphor coated on an inner surface thereof;

      a first electrode disposed at said first end portion in said light tube, electrically connecting to said first terminal;

10      a second electrode disposed at said second end portion in said light tube, electrically connecting to said second terminal for emitting electrons to excite said mercury substance for conducting said electrons to said first electrode as an electric loop, wherein said excited mercury substance emits ultra violet rays causing said phosphor coating to generate visible light; and

      an activated gas absorber, made of zirconium-vanadium-iron alloy, formed at said second electrode for absorbing oxygenic gas.

15      14. The cold electrode fluorescent lamp, as recited in claim 13, wherein said activated gas absorber is made from a zirconium-vanadium-iron gas absorber which is activated at an activation temperature of lower than 900 degrees Celsius.

20      15. The cold electrode fluorescent lamp, as recited in claim 1, wherein said activated gas absorber is made from a zirconium-vanadium-iron gas absorber which is activated at an activation temperature of 390 degrees Celsius.

      16. The cold electrode fluorescent lamp, as recited in claim 13, further comprising an igniter casing extending from said base and supporting said housing.

25      17. The cold electrode fluorescent lamp, as recited in claim 14, further comprising an igniter, which is disposed in said igniter casing, electrically connected to said first and second terminals, for driving said second electrode to function.

18. The cold electrode fluorescent lamp, as recited in claim 15, wherein said housing is air-tightly attached to said igniter casing for maintaining heat therein in order to warm said second electrode.

19. The cold electrode fluorescent lamp, as recited in claim 15, further comprising an air passage for balancing pressure within and without said housing.  
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20. The cold electrode fluorescent lamp, as recited in claim 13, wherein said housing is made of color for effects of colorful illumination.

21. The cold electrode fluorescent lamp, as recited in claim 13, wherein said housing is made of a material selected from a group consisting of glass and plastic.